AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF PAGES
	1	2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
Am-0004	6/12/03		

6. ISSUED BY CODE

U.S. Army Engineer District, Honolulu
Corps of Engineers, Building 230
ATTN: CEPOH-CT-C (Jennifer Ko)
Fort Shafter, Hawaii 96858-5440

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

CODE FACILITY CODE

(√) X

9A. AMENDMENT OF SOLICITATION NO.
DACW83-03-R-0004

9B. DATED *(SEE ITEM 11)*
5/6/03

10A. MODIFICATION OF CONTRACTS/ORDER NO.

10B. DATED *(SEE ITEM 13)*

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(√) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Solicitation No. DACW83-03-R-0004, Tern Island Shore Protection Projects, Tern Island, French Frigate Shoals, Hawaii

(Continued on Page 2)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY *(Signature of Contracting Officer)*	16C. DATE SIGNED

1. CHANGES TO SPECIFICATIONS. Attached hereto are new and revised pages to the solicitation. The revision mark (Am-0004) is shown on each new and revised page.

a. REVISED PROVISIONS/CLAUSES/PARAGRAPHS/PAGES. Following are revised pages to the solicitation. Changes are indicated in **bold** print. Although the entire section is being re-issued under (Am-0004), only the following sections/pages/paragraphs changed in this section.

Section 00010, Proposal Schedule, Pages 4 and 7
Section 00120, Paragraph 3.5, Pages 10 and 11
Section 02464, Pages 1, 3, and 4
Section 03311, Pages 6 and 14 (only these pages are provided)

b. NEW CLAUSES/PAGES. The following are new pages to the solicitation.

Section 00900, Miscellaneous Attachments:
Contractor Questions and Answers (1 page)

2. The proposal due date of June 19, 2003, 2:00 P.M., Hawaiian Standard Time, remain unchanged.

SECTION 00010
PROPOSAL SCHEDULE

SHORE PROTECTION PROJECTS
TERN ISLAND, FRENCH FRIGATE SHOALS, HAWAII

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
	BASE SCHEDULE				
	IMPROVEMENTS TO TERN ISLAND PHASE II SHORE PROTECTION (ROCK REVETMENT WORK)				
1.	Mobilization and Demobilization	1	Job		$_____
2.	Revetment, RL "B"	1	Job		$_____
3.	Revetment, RL "A" Sta. 0+73 to Sta. 2+50	1	Job		$_____
4.	Revetment, RL "A" Sta. 4+50 to Sta. 14+50	1	Job		$_____
	TOTAL BASE SCHEDULE				$_____
	OPTIONS				
	IMPROVEMENTS TO TERN ISLAND PHASE II SHORE PROTECTION (ROCK REVETMENT WORK)				
5.	Option 1, Revetment Tie-Back No.1	1	Job		$_____
6.	Option 2, Revetment Tie-Back No. 2	1	Job		$_____
7.	Option 3, Revetment Tie-Back No. 3	1	Job		$_____
8.	Option 4, Revetment Tie-Back No. 4	1	Job		$_____
9.	Option 5, Revetment, RL "A" Sta. 2+50 to Sta. 4+50	1	Job		$_____
10.	Option 6A, Revetment, RL "A" Sta. 14+50 to Sta. 25+00	1,050	LF	$_____	$_____
11.	Option 6B, Demolition and Disposal Of Sheet Pile Bulkhead, Sta. 16+25 To Sta. 17+25	1	Job		$_____
12.	Option 7, Revetment, RL "A" Sta. 25+00 to Sta. 30+50	550	LF	$_____	$_____

13.	Option 8, Revetment, RL "A" Sta. 30+50 to Sta. 36+00	550	LF	$_____	$_____

IMPROVEMENTS TO TERN ISLAND
(STEEL SHEET PILE WORK)

14.	Option 9, Improvements	1	Job		$_____

U.S. FISH & WILDLIFE SERVICE
TERN ISLAND NWR, SHEET PILE SEA WALL
GALVANIC CATHODIC PROTECTION SYSTEM

15.	Option 10, Cathodic Protection System	1	Job		$_____
16.	Option 11, Removal Action				
	a. Mobilization and Demobilization	1	Job		$_____
	b. Non-Hazardous Waste less than 50 ppm (PCB)	2,000	Tons	$_____	$_____
	c. Soil more than 50 ppm (PCB)	15	Tons	$_____	$_____
	d. Soil more than 400 ppm (Pb)	15	Tons	$_____	$_____
	e. Remove Transformer	1	Each		$_____
	f. Analytical Cost	1	Job	$_____	$_____
	g. Asbestos Abatement	**2**	**Tons**	**$_____**	**$_____**

TOTAL OPTIONS	$_____
TOTAL BASE SCHEDULE PLUS OPTIONS	$_____

THE FOLLOWING WILL BE COMPLETED BY THE CONTRACTING OFFICER UPON AWARD:
TOTAL AWARD AMOUNT (Base Schedule Plus Option Nos._____) $_____

NOTES TO PROPOSAL SCHEDULE:

1. By submission of an offer under the OPTIONS, Offeror agrees that the Government may exercise some or all of the OPTION(S) at the time of the award, or at any time following the date of the award of the contract. (See Paragraph S-17.1, OPTION FOR INCREASED SCOPE--SEPARATELY PRICED LINE ITEM, in Section 00800 and PROVISION No. 52.217-5, EVALUATIONS OF OPTIONS, in Section 00100).

2. Any key personnel or joint venture partners identified in the Offeror's proposal in connection with performance of the subject contract shall be the same individuals or firms that are employed in performing the contract. The Offeror shall obtain the Contracting Officer's written consent before making any substitution for these key personnel or joint venture partners. Any request for substitution shall be in writing to the Contracting Officer, shall allow 30 days for a response, and shall include the following: 1) the reason for the proposed substitution; and 2) documentation demonstrating that the substitute possesses past performance, experience, personnel qualifications, and operating capacity at least equal to those that the entity that the substitute will replace reflecting the proposed substitution. Any associated cost or time loss resulting from this substitution process shall be the responsibility of the Contractor and shall not be a basis for any claim.

MEASUREMENT AND PAYMENT(S)

Compensation for all work to be performed under this contract will be made under the payment item(s) listed herein. The principal features of the work to be included under the payment items(s) are noted. Work required by the drawings and specifications and not particularly mentioned shall be included in and be paid for under the contract price for the item to which the work pertains. Price(s) and payment(s) for the item(s) shall cover all work, complete and finished in accordance with the specifications, schedules, and drawings, and shall be full compensation for all work in connection therewith, including quality control and cost of performance and payment bond premiums as specified in the CONTRACT CLAUSES. Price(S) and payment(S) shall constitute full and final compensation for furnishing all materials, equipment, management, supervision, labor, transportation, fuel, power, water, and all incidental items necessary to complete the work, except as otherwise specified to be furnished by the Government. For the purpose of CONTRACT CLAUSE entitled "PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS" the term "designated billing office" and "designated payment office" area as follows:

a. Billing Office:
U.S. Army Engineer District, Honolulu
Fort Shafter Resident Office, Bldg. 230
Fort Shafter, HI 96858-5440

b. Payment Office:
USACE Finance Center
ATTN: CEFC-FP
5722 Integrity Drive
Millington, TN 38054-5005

Item numbers mentioned herein after correspond to the item numbers in the PROPOSAL SCHEDULE.

a. Item No. 1, MOBILIZATION AND DEMOBILIZATION, will be paid for at the contract price, complete, including miscellaneous items, protection of the environment, cleanup, demobilization, and all the incidental items necessary to complete the work. This item shall include all work not called for by any other bid item. Payment shall also include the cost of premiums for performance and payment bonds specified in the SPECIAL CONTRACT CLAUSES. Payment for this item will be in the proportion of 70 percent mobilization and 30 percent demobilization.

b. Item No. 2, REVETMENT, RL "B", will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, fumishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

c. Item No. 3, REVETMENT RL "A" STA. 0+73 TO STA. 2+50, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

d. Item No. 4, REVETMENT RL "A" STA. 4+50 TO STA. 14+50, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

e. Item No. 5, (OPTION 1), REVETMENT TIE-BACK NO. 1, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

f. Item No. 6, (OPTION 2), REVETMENT TIE-BACK NO. 2, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

g. Item No. 7, (OPTION 3), REVETMENT TIE-BACK NO. 3, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

h. Item No. 8, (OPTION 4), REVETMENT TIE-BACK NO. 4, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

i. Item No. 9, (OPTION 5), REVETMENT, RL "A" STA. 2+50 TO STA. 4+50, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

j. Item No. 10, (OPTION 6A), REVETMENT, RL "A" STA. 14+50 TO STA. 25+00, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

k. Item No. 11, (OPTION 6B), DEMOLITION AND DISPOSAL OF SHEET PILE BULKHEAD, STA. 16+25 TO STA. 17+25, will be paid for at the job price, complete in place, including site preparation, excavation, demolition, disposal as required, cleanup, and all incidental items necessary to complete the work.

l. Item No. 12, (OPTION 7), REVETMENT, RL "A" STA. 25+00 TO STA. 30+50, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

m. Item No. 13, (OPTION 8), REVETMENT, RL "A" STA. 30+50 TO STA. 36+00, will be paid for at the contract price, complete in place, including site preparation, excavation, removal and disposal, quarrying or borrowing, hauling and shipping, stockpiling, placement of fill material, furnishing and placing of geotextile filter fabric, placement of stones, demolition, removal and disposal as required, cleanup, and all incidental items necessary to complete the work.

n. Item No. 14, (OPTION 9), IMPROVEMENTS, will be paid for at the contract price, complete in place and ready for use, including mobilization and demobilization, demolition, earthwork, sheet pile wall and anchors, small boat launch ramp, small boat dock, testing, final connections, cleanup, and all incidental items necessary to complete the work.

o. Item No. 15, (OPTION 10), CATHODIC PROTECTION SYSTEM, will be paid for at the contract price, complete in place and ready for use, including cleanup and all incidental items necessary to complete the work.

p. Item No. 16a, (OPTION 11a), REMOVAL ACTION, MOBILIZATION AND DEMOBILIZATION, will be paid for at the contract price, complete, including miscellaneous items, protection of the environment, cleanup, demobilization, and all the incidental items necessary to complete the work.

q. Item No. 16b, (OPTION 11b), REMOVAL ACTION, NON-HAZARDOUS WASTE LESS THAN 50 PPM (PCB).

(1) Measurement for payment will be to the nearest ton of non-hazardous waste less than 50 ppm (PCB) acceptably removed and disposed.
(2) Payment for tons of non-hazardous waste less than 50 ppm (PCB) acceptably removed and disposed will be made at the applicable contract price per ton, including cleanup and all incidental items necessary to complete the work.

r. Item No. 16c, (OPTION 11c), REMOVAL ACTION, SOIL MORE THAN 50 PPM (PCB).

(1) Measurement for payment will be to the nearest ton of soil more than 50 ppm (PCB) acceptably removed and disposed.
(2) Payment for tons of soil more than 50 ppm (PCB) acceptably removed and disposed will be made at the applicable contract price per ton, including cleanup and all incidental items necessary to complete the work.

s. Item No. 16d, (OPTION 11d), REMOVAL ACTION, SOIL MORE THAN 400 PPM PCB).

(1) Measurement for payment will be to the nearest ton of soil more than 400 ppm (PCB) acceptably removed and disposed.
(2) Payment for tons of soil more than 400 ppm (PCB) acceptably removed and disposed will be made at the applicable contract price per ton, including cleanup and all incidental items necessary to complete the work.

t. Item No. 16e, (OPTION 11e), REMOVAL ACTION, REMOVE TRANSFORMER, will be paid for at the contract price, including cleanup, and all incidental items necessary to complete the work.

u. Item No. 16f, (OPTION 11f), REMOVAL ACTION, ANALYTICAL COST, will be paid for at the contract price, complete for sampling and testing as shown in Table 1 and paragraph 4.4, and SSHP and PWP as required in paragraph 4.2 and paragraph 4.4 of Scope of Work (Removal of Contaminated Soil and Other Wastes, at Form U.S. Coast Guard Loran Station, Tern Island, French Frigate Shoals, Hawaii).

v. Item No. 16g, (OPTION 11g), ASBESTOS ABATEMENT:

(1) Measurement for payment will be to the nearest ton of asbestos material acceptably removed and disposed.
(2) Payment for tons of asbestos material acceptably removed and disposed will be made at the applicable contract price per ton, including all incidental items necessary to complete the work.

- End of Section -

SECTION 00120

PROPOSAL SUBMISSION REQUIREMENTS
AND
EVALUATION FACTORS FOR AWARD

1.0 GENERAL:

1.1 Cost of Preparing Proposals: The Government will not reimburse any Offeror its costs incurred in submitting an offer in response to this solicitation.

1.2 Inquiries: Address all inquiries regarding this Request for Proposals to:

U.S. Army Engineer District, Honolulu
Attn: Ms. Jennifer Ko (CEPOH-CT-C)
Building S-200
Fort Shafter, Hawaii 96858-5440
Phone No. (808) 438-8584
Fax No. (808) 438-8588
E-Mail: jennifer.ko@usace.army.mil

1.3 Proposal submission and evaluation:

1.3.1 The Government will evaluate offers in accordance with the NON-PRICE EVALUATION FACTORS (the technical proposal) and the offeror's price, as set forth in this Provision.

1.3.2 During proposal evaluation, the NON-PRICE EVALUATION FACTORS will be evaluated to determine acceptability by a Source Evaluation Board (SEB) utilizing the method described below.

1.3.3 Basis for award. The Government intends to award a contract to the responsible Offeror whose proposal is the Lowest Priced Technically Acceptable (LPTA) proposal. The technical proposal will consist of evaluation factors in which offerors will receive either an acceptable or unacceptable rating for each non-price evaluation factor and subfactor.

1.3.3.1 Technical proposals (Volume I)

1.3.3.2 Price Proposals (Volume II)

1.3.4 The Government intends to award a contract without discussions to the offeror with the lowest priced, technically acceptable proposal, in accordance with the provisions of this solicitation and applicable acquisition regulations. An acceptable rating for each non-price evaluation factor and subfactor is required for an offeror's proposal to be considered for award. Failure to receive an acceptable rating for any factor or subfactor will result in rejection of the offeror's proposal notwithstanding acceptable ratings for other factors or subfactors. Those Offerors who receive an unacceptable rating on any of the non-price evaluation factors/subfactors will not be considered for award without discussions.

1.3.4.1 Price proposals from only those offerors that received an acceptable rating for each non-price evaluation factor and subfactor will be considered for award. If discussions of an Offeror's price proposal are determined to be necessary, discussions will be conducted with Offeror(s) determined to be in the competitive range.

1.3.4.2 If all technical proposals are determined to be technically unacceptable, the Contracting Officer may conduct discussions. Discussions will be conducted with Offeror(s) determined to be in the competitive range.

1.3.4.3 Upon conclusion of discussions, if necessary, the Contracting Officer will request final proposal revisions from the Offerors remaining in the competitive range and may, upon receipt of final proposal revisions, proceed to award a contract without further discussions or notice.

1.3.5 TECHNICAL. Numerical scores and other point-scoring techniques will not be used in the evaluation process. Each factor or subfactor will be rated either Acceptable or Unacceptable. The Government will evaluate offers in accordance with the EVALUATION FACTORS described in paragraph 3.0 of this section and the Offeror's proposed total price.

1.3.5.1 Factors/subfactors will be evaluated against the standards described in this section. Each factor/subfactor will receive one of the following ratings:

1.3.5.1.1 Acceptable: Proposal is acceptable; proposal demonstrates acceptable understanding of requirements. Offeror's proposed capability or proposed effort is of an acceptable level of quality and justified or substantiated by meeting the requirements of each factor.

1.3.5.1.2 Unacceptable: Proposal is unacceptable; Government's requirements are not met. The Offeror's proposal lacks evidence of capability to perform proposed effort or did not provide adequate responses to the requested data to receive an acceptable rating.

1.3.6 PRICE. The Offeror's price proposal will not be rated, but will be evaluated separately from the offeror's technical proposal. The Government shall compare the competing prices proposed by all offerors determined to have submitted acceptable offers, together with the Government's Estimate, to establish price reasonableness. Cost analysis will not likely be performed under this solicitation, however, the offerors' price breakdown will be evaluated for reasonableness.

2.0 PROPOSAL SUBMISSION REQUIREMENTS: Offeror shall provide an INDEX for each of the proposal volumes/sections that shows the title of the subject matter discussed therein and the page number where the information can be found. In particular, Offeror shall specifically refer to the topics and evaluation factors addressed in this section of the instructions. Offeror shall tab and index the proposal to match the listed factors and subfactors. Proposals that are not tabbed and indexed may be considered non-responsive.

2.1 General Requirements for Proposals:

2.1.1 Submission requirements for proposals.

2.1.1.1 Volume 1 - Technical Proposals. The first envelope shall be clearly marked, 'VOLUME I - TECHNICAL PROPOSAL", RFP NO. DACW83-03-R-0004." It shall contain:

2.1.1.1.1 Submit one (1) original proposal and four (4) copies, in the format for Technical Proposals as set forth in this Provision.

2.1.1.2 Volume 2 - Price Proposals. The second envelope shall be clearly marked, "VOLUME II - PRICE PROPOSAL", RFP NO. DACW83-03-R-0004." It shall contain:

2.1.1.2.1 One (1) original and two (2) copies of the Offeror's completed Standard Form (SF) 1442, using a printed copy of the SF 1442 that has been issued under this solicitation;

2.1.1.2.2 Complete and submit one (1) original and two (2) copies of Section 00010, the Price Proposal Schedule. Indicate on the Price Breakdown whether or not Facilities Capital Cost of Money is included in the contractor's costs of performing the work. Proposals that state that Facilities Capital Cost of Money is not included in the contractor's costs of performing the work—or proposals that don't state anything at all about Facilities Capital Cost of Money—will be deemed to have waived Facilities Capital Cost of Money.

2.1.1.2.3 One (1) electronic copy of the Price Breakdown, formatted in either Microsoft Excel 2000 or Word for Windows 2000 or an earlier version of the same. Submit the electronic copy of a three and one-half inch (3-1/2") diskette, IBM compatible, labeled with the offeror's name, the solicitation number and title, and the words, "Price Breakdown - Electronic Copy."

2.1.1.2.4 One (1) copy (certified as a true copy) of the Offeror's executed joint venture agreement (if the Offeror is a joint venture);

2.1.1.2.5 One (1) copy of the Offeror's completed Section 00600, Representations and Certifications, using a printed copy of Section 00600 that has been issued under this solicitation;

2.1.1.2.6 One (1) copy of the Offeror's completed (if applicable) SF LLL, Disclosure of Lobbying Activities, using a printed copy of the SF LLL which is found in Appendix A to Section 00600; and

2.1.1.2.7 Submit one original bid bond in the form and amount that is required by the provision entitled, "PENAL SUM AND FORM OF OFFER GUARANTEE," in Section 00100, and other pertinent provisions and clauses in this solicitation.

2.2 Format Requirements for Proposals:

2.2.1 Any information, presented with a proposal that an Offeror wants to have safeguarded from disclosure to other parties must be identified and labeled in accordance with the requirements of Provision "52.215-1, Instructions to Offerors—Competitive Acquisition (May 2001)," subparagraph (e), which is found in Section 00100 of this solicitation. The Government

will endeavor to honor the restrictions against release requested by Offerors, to the extent permitted under United States law and regulations.

2.2.2 Prepare proposals in the English language.

2.2.3 Type or print all information presented in the proposal, to the extent possible. Use clear, simple English letters and numbers. Laser printer-quality printing is adequate for the proposals. Elaborate calligraphy is not desired. Do not use size printing or typing less than 10 pitch (United States). Use black characters on white paper as much as possible. Color should be used for clarity, not for purposes of decoration. Do not use colors that do not reproduce legibly using standard office or commercial facsimile or copying machines. Prepare technical proposals on standard (United States), letter-sized (8.5 x 11 inches) or substantially similar international/metric-sized pages. Use only one side of the page. Use non-glossy paper of good weight and quality. Expensive or elaborate paper stock is not desired.

2.2.4 Submit proposal packages to the US Army Corps of Engineers ("the Government") as shown in Block 8 of Standard Form 1442.

2.2.5 Proposals received by the Government after the date and time set for receipt of proposals will be handled in accordance with the requirements of Provision "52.215-1, Instructions to Offerors—Competitive Acquisition (May 2001)," subparagraph (c), found in Section 00100.

2.3 Specific Requirements for Technical Proposals:

2.3.1 Submit technical proposals in a narrative format, organized and titled so that each section of the proposal follows the order and format of the factors and subfactors set forth below in paragraph 3.0. "Evaluation Factors and Submission Requirements."

2.3.2 Proposal clarity, organization and cross referencing is mandatory. Failure to submit and organize proposals as requested may adversely affect an offeror's evaluation. Offerors should provide sufficient detail and clearly address all items required in this section. Written portions of the proposal shall be on 8-1/2 by 11 inch paper with three holes punched, in a three-ring binder. Drawings shall be full-size bound separately. Offerors shall label and tab their proposals consistent with the requirements of this section. A table of contents shall be provided to facilitate review and cross referencing. The proposal shall have an index for each item submitted. Each page of the proposal shall have the page number on the bottom of the page starting with the first page to the last numbered consecutively.

2.3.3 Information presented in the technical proposal should be sufficiently detailed to clearly describe how the technical proposal addresses the technical proposal evaluation factors. Professional looking and well organized proposals will likely be considered to reflect more favorably on the capabilities of the Offeror; however, it is not the Government's intent to require elaborate "magazine-style" proposals. It is not necessary, nor desired, that Offerors prepare elaborate or lengthy proposals.

2.3.4 There is no limit to the size of technical proposals, or the amount of information that may be submitted to the Government. However,

information should be concisely presented, to the extent possible. Information presented should be organized so as to pertain to only the evaluation factor or subfactor in which section the information is presented. Information pertaining to more than one evaluation factor or subfactor should be repeated for each factor or subfactor.

2.3.5 The proposal must set forth full, accurate, and complete information as required by this solicitation. The Government will rely on such information in the award of a contract. By submission of an offer, the Offeror agrees that all items (i.e. Key personnel) in its proposal will be used throughout the duration of the contract and any substitutions of items will be equally or better qualified and shall require prior approval by the Contracting Officer.

2.3.6 The Offeror's price proposal will be evaluated separately from the offeror's technical proposal. The Government will compare the competing prices proposed by all offerors determined to have submitted technically acceptable offers to establish price reasonableness.

3.0 EVALUATION FACTORS AND SUBMISSION REQUIREMENTS

3.1 All proposals will be evaluated on non-price factors and price. Offerors are required to provide data addressing all stated factors. If an Offeror does not have data relating to a specific factor, it shall be clearly stated. Offers that do not address all factors may be considered non-responsive and may not receive further consideration.

3.2 Non-price evaluation factors are equally important. All subfactors within a factor have equal importance.

3.2.1 TECHNICAL FACTORS:

Factor I, Past Performance and Past Experience

Subfactor A - Past Performance

Subfactor B - Past Experience

Factor II, - Key Personnel

Factor III, Small Business Program

3.2.2 PRICE

3.3 Each technical factor and subfactor will be evaluated on an acceptable/unacceptable basis. Acceptability will be based upon submission of all of the requirements identified in the respective submission section, and the following:

3.3.1 For Past Performance - The Offeror has provided at least two (2) projects meeting the stated criteria for relevancy and recency (completed after 1990) receiving no less than a satisfactory final performance rating and at least one performance rating shall be above average or better; and the Offeror must not have received an Unsatisfactory performance evaluation on any State or Federal Government contract after 1990.

3.3.2 For Past Experience - The offeror must demonstrate experience on at least two (2) relevant projects completed after 1990, in which they were/are the prime contractor on a project that contained marine construction in an island setting.

3.3.2.1 Offerors will receive an acceptable or unacceptable rating for experience. If the Government concludes, based upon the evaluation of an Offeror's proposal, that there is significant doubt as to the offeror's ability to successfully perform and complete the required work, the offeror will be found technically unacceptable for this subfactor.

3.3.3 For Key Personnel - The proposal includes all requested information for the factor. All proposed key personnel shall meet the minimum qualification standards described in paragraph 3.4.3.

3.3.4 For Small Business Program - Offeror's Small Business Subcontracting Plan goals were met or reasonable justifications for not achieving these goals were provided. Offers from Small Business concerns shall receive an acceptable rating for this factor.

3.4 Technical Proposal. Data provided in response to the non-price factors described below shall be included in the “Technical Proposal”.

3.4.1 Relevant Experience. Relevant experience refers to marine construction (the construction/reconstruction activities and maintenance of piers, abutments, harbor improvements, channel improvements and other marine related structures or activities) in an island setting.

3.4.2 Evaluation Factor (1) Past Performance and Past Experience. Data provided in support of this factor shall clearly demonstrate the Offeror’s ability to meet the requirements of the contract based on his past experience and past performance history on relevant projects similar in scope to this contract and performed in an island setting. Only past experience and past performance considered relevant to this project will be considered (see paragraph 3.4.1 above).

3.4.2.1 Subfactor (1)(A) Past Performance. For each of the contracts identified in Subfactor B, Past Experience, indicate the final overall performance rating received. Only performance ratings for the Offeror will be considered. Provide documentation of the indicated rating in this tab. Undocumented performance ratings will not be considered.

3.4.2.1.1 The Government will review and evaluate information about each offeror's past performance and will rate offerors as acceptable or unacceptable on the basis of their documented past performance. By "past performance" the Government means an offeror's reputation for satisfying its customers by delivering quality work in a timely manner at a reasonable price. Past Performance also includes an offeror's reputation for integrity, reasonable and cooperative conduct, effective subcontractor management, and commitment to customer satisfaction. In reviewing and evaluating an offeror's past performance, the Government will consider information obtained from the offeror and may consider information from other sources, including past and present customers and their current and former employees. Note the unavailability (due to nonexistence) of past performance records or information cannot result in an unacceptable rating for this subfactor, but instead, will result in a neutral rating. Evidence that an offeror has poor past performance in any area may result in an unacceptable

rating for the entire subfactor.

3.4.2.1.2 The information provided by the Offeror will include the major portion of the information used in the Government's evaluation for past performance. The Government may use other sources to assess past performance information including the Construction Contractor Appraisal Support System (CCASS) and make inquiries to previous customers/owners/subcontractors.

3.4.2.2 Subfactor (1)(B) Past Experience. Offerors shall identify contracts demonstrating relevant experience completed after 1990, in which they were/are the prime contractor.

3.4.2.2.1 For each of the projects provided in support of this factor, a Project Data Sheet shall be completed. This sheet shall include all of the data listed below. All requested information must be provided. Failure to provide any of the requested data may be cause to eliminate a project from consideration in the evaluation.

3.4.2.2.1.1 Contract Number, Project Description and Location,

3.4.2.2.1.2 Contracting Officer/Owner's Point of Contact, Telephone Number, Facsimile Number,

3.4.2.2.1.3 Original Contract Amount,

3.4.2.2.1.4 Final Contract Amount,

3.4.2.2.1.5 Contract Award Date,

3.4.2.2.1.6 Original Completion Date,

3.4.2.2.1.7 Final Completion Date (as established by contract modifications),

3.4.2.2.1.8 Actual Completion Date (date work accepted by the customer),

3.4.2.2.1.9 Estimated Percentage of Actual onsite Construction Work that the Offeror and its employees performed on the project,

3.4.2.2.1.10 Letters of Appreciation or Commendation and Awards. Letters or other communications generated specifically for purposes of this solicitation may not be given as much weight as evaluations and other communications that are generated in the ordinary course of business.

3.4.2.2.1.11 Final Performance evaluation (if customer was the Federal Government, submit Standard Form 1420 or DD Form 2626),

3.4.2.2.1.12 Offerors that report an adverse or unfavorable interim or final performance evaluation should attach a narrative that explains, rebuts, or describes lessons learned from the adverse or unfavorable evaluation.

3.4.2.2.1.13 For each completed project which the Offeror identifies as an example of past performance, describe that completed project's relevance to the current, proposed project in terms of the Offeror's proposed use of the same key management personnel.

3.4.2.2.1.14 State why or how the Offeror's experience with the described project is relevant to the Offeror's expectation of successful completion of this project.

3.4.2.2.2 If the Offeror intends to rely on its joint venture partners past experience, the Offeror shall submit Project Data Sheets demonstrating relevant past experience.

3.4.2.2.3 In order to demonstrate the depth of its experience, Offerors may submit data for themselves and their joint venture partners for the same project. However, the submission of data on the same project will only be counted as a single project.

3.4.2.2.4 The Government will review and evaluate the documentation submitted with each proposal with respect to the offeror's past and current work experience, including technical similarities between the offeror's work experience and the work described in this solicitation. Direct experience of the offeror or any joint venture partners that any offeror proposes to utilize in the execution of this project will be considered.

3.4.3 Evaluation Factor (2) Key Personnel.

3.4.3.1 If an Offeror is awarded a contract, all key personnel identified in the Offeror’s proposal shall be used on the contract. Substitution or addition of any key personnel not identified in a successful Offeror’s proposal must be submitted for review and acceptance by the Contracting Officer prior to the start of work by that individual. The Contractor is informed that the Government will be allowed 30 days to respond. Any delays resulting from this post-award process shall be the responsibility of the contractor and shall not be a basis for any equitable contract adjustment.

3.4.3.2 The Government will review and evaluate the qualifications and experience of each of the offeror’s proposed key personnel. The offeror must include the following three (3) positions to be used on this project: Contractor Quality Control Systems Manager, Project Manager, and On-Site Construction Manager. The On-Site Construction Manager may be the same person as the Project Manager. The offeror's Contractor Quality Control Systems Manager shall have a minimum of two (2) years marine construction experience (in the proposed position) on projects of similar scope and complexity. In addition, the offeror’s Contractor Quality Control Systems Manager shall have a minimum of 5 years construction experience. Offeror must address how the proposed Contractor Quality Control Systems Manager has met or will meet the requirement for completing the course entitled, “Construction Quality Management for Contractors” prior to beginning work. The Project Manager/On-Site Construction Manager shall have a minimum of two (2) years experience on marine construction and rock revetment or rock breakwater construction projects.

3.4.3.2.1 Identify the individuals proposed to fill the

key personnel positions identified above. Provide resumes for each individual. Resumes must support the individual's qualifications to perform in the identified position, including any special skills or experiences deemed worthy of note. Resumes shall include a List of projects completed by the proposed individual. The list shall include contract number, completion date, title, detailed description, and dollar value, and position held.

3.4.4 Evaluation Factor (3)- Small Business Program. Past performance in complying with Small Business Subcontracting Plan. Offerors shall submit data that demonstrate its use of Small Business Concerns. Small Business Concerns include small disadvantaged businesses (SDB), women-owned small businesses, HUBZone small businesses, veteran-owned small businesses and service disabled veteran-owned small businesses.

- Provide SF 294' s, "Subcontracting Report for Individual Contracts" for projects of similar scope. Provide reasonable justifications if goals were not met.

3.5 Price Proposal

3.5.1 The Offeror's price proposal will be evaluated separately from the offeror's non-price proposal. The Government will compare the competing prices proposed by all Offerors determined to have submitted technically acceptable offers to establish price reasonableness.

3.5.2 A price breakdown shall be included in Volume II, "Price Proposal". Only a lump sum price for each of the items identified below is required. Do not submit a cost breakdown.

Proposal costs shall be broken down as follows:	
Bid item No. 1, Mob and demob	
1	Barging costs including unloading and stockpiling
2	Setup costs to include contractors offices and facilities, and all temporary structures.
3	All other associated costs.
4	Total Direct Cost
5	Field Overhead Cost
6	All other indirect costs
7	Total Cost Bid item No. 1, Mob and demob
Bid item No. 2 RL "B"	
1	Barging costs including unloading and stockpiling
2	Revetment cost including cost for stone, excavation, backfill and all associated costs.
3	Total Direct Cost
4	Field Overhead Cost
5	All other indirect costs
6	Total Cost Bid item No. 2
Bid item No. 3 RL "A" 0+73 to 2+50	
1	Breakdown items 1 thru 6 same as Bid item No. 2
Bid item No. 4 RL "A" 4+50 to 14+50	
1	Breakdown items 1 thru 6 same as Bid item No. 2

Bid item No. 5, Option 1: Revetment Tie-back No. 1	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 6, Option 2: Revetment Tie-back No. 2	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 7, Option 3: Revetment Tie-back No. 3	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 8, Option 4: Revetment Tie-back No. 4	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 9, Option 5: RL "A" 2+50 to 4+50	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 10, Option 6a: RL "A" 14+50 to 25+00	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 11, Option 6b: Demolition & disposal of sheetpile bulkhead 16+25 to 17+25	
1	No further breakdown required.
Bid item No. 12, Option 7: RL "A" 25+00 to 30+50	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 13, Option 8: RL "A" 30+50 to 36+00	
1	Breakdown items 1 thru 6 same as Bid item No. **2**
Bid item No. 14, Option No. 9: Improvements	
1	Mob and demob including barging costs, unloading and stockpiling
2	Sheetpile bulkhead including sheetpile, concrete pilecap, tie-rods, deadman and all other associated costs.
3	Bollards and fenders
4	Boatramp including AZ-18 retaining sheetpile
5	Total Direct Cost
6	Field Overhead Cost
7	All other indirect costs
8	Total Cost Bid item No. **14,** Improvements
Bid item No. 15, Option 10 Cathodic Protection System	
1	No further breakdown required.
Bid item No. 16, Option 11 Removal Action	
16a	Mob and demob including barging costs, unloading and stockpiling
16b	Soil less than 50 ppm (PCB)
1	Excavation cost including testing, monitoring, loading barges and all associated costs.
2	Disposal cost including barging, fees, trucking and all associated costs.
3	Total Direct Cost
4	Field Overhead Cost
5	All other indirect costs
16c	Soil more than 50 ppm (PCB)

1	Breakdown items 1 thru 5 same as Bid item No. 6a
16d	Soil more than 400 ppm (Pb)
1	Breakdown items 1 thru 5 same as Bid item No. 6a
16e	Remove transformer
1	No further breakdown required.
16f	Analytical Cost
1	No further breakdown required.
16g	**Asbestos Abatement**
1	**No further breakdown required.**

SECTION 00900
MISCELLANEOUS ATTACHMENT
(Contractor Questions and Answers)

Q1. What is the estimated quantity of mercury containing lamp waste? Where should costs associated with this waste stream be included in the units provided with the RFP?

RESPONSE: As of the time this contract is awarded, the Government is uncertain in the amount of mercury lamp switches in the landfill site. Upon discovering presence of mercury lamp switches in any part of the structures, the Contractor shall notify the Government thereof as soon as practicable. Upon becoming aware of presence of mercury lamp switches in any part of the structures through the contractor's notice or otherwise, the Government shall modify the contract for mercury lamp switches and make an equitable adjustment to the contract price as called under the contract clause entitled Changes.

Q2. Are the costs associated with Asbestos remediation to be included with line Item 16b?

RESPONSE: See Am-0004.

Q3. Will the Corp require enclosures during the excavation activities as indicated in the asbestos specifications?

RESPONSE: The excavation will be wet. Enclosures will not be required.

Q4. If allowed by the receiving "disposal" facility, will it be necessary to segregate suspect ACM from the soils during the excavation process? If so, please specifiy which categories will be allowed to remain and which will require segregation and re-packaging.

RESPONSE: All asbestos should be segregated from the soil.

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE WORK

SECTION 02464

METAL SHEET PILING

-- End of Section Table of Contents --

SECTION 02464

METAL SHEET PILING

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 6/A 6M	(1995b) General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
ASTM A 572/A 572M	(1994c) High-Strength Low-Alloy Columbium-Vanadium Structural Steel

1.2 SUBMITTALS

Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

Metal Sheet Piling; FIO.

Detail drawings for sheet piling including fabricated sections shall show complete piling dimensions and details, driving sequence and location of installed piling. Detail drawings shall include details and dimensions of templates and other temporary guide structures for installing piling. Detail drawings shall provide details of the method of handling piling to prevent permanent deflection, distortion or damage to piling interlocks.

SD-07 Schedules

Pile Driving Equipment; FIO.

Complete descriptions of sheet piling driving equipment including hammers, extractors, protection caps and other installation appurtenances shall be submitted for approval prior to commencement of work.

SD-08 Statements

Pulling and Redriving; FIO.

The proposed method of pulling sheet piling shall be submitted and approved prior to pulling any piling.

SD-09 Reports

Interlocked Joint Strength in Tension Test; FIO.

The procedure for testing sheet piling interlocked joint strength in tension shall be submitted and approved prior to testing piling.

Materials Tests; FIO.

Certified materials tests reports showing that sheet piling and appurtenant metal materials meet the specified requirements shall be submitted for each shipment and identified with specific lots prior to installing materials. Material test reports shall meet the requirements of ASTM A 6/A 6M.

SD-18 Records

Driving; FIO.

Records of the sheet piling driving operations shall be submitted after driving is completed. These records shall provide a system of identification which shows the disposition of approved piling in the work, driving equipment performance data, piling penetration rate data, piling dimensions and top and bottom elevations of installed piling. The format for driving records shall be as directed.

1.3 DELIVERY, STORAGE AND HANDLING

Materials delivered to the site shall be new and undamaged and shall be accompanied by certified test reports. The manufacturer's logo and mill identification mark shall be provided on the sheet piling as required by the referenced specifications. Sheet piling shall be stored and handled in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage to the interlocks. Storage of sheet piling should also facilitate required inspection activities. Sheet piling over 80 feet in length shall be handled using a minimum of two pickup points.

PART 2 PRODUCTS

2.1 METAL SHEET PILING

Metal sheet piling shall be hot-rolled steel sections conforming to ASTM A 572/A 572M, Grade 50, Type I, II, III, IV, or combination thereof, interlocked joint strength in tension as shown. **The interlocks of sheet piling shall be free-sliding, provide a swing angle suitable for the intended installation, and maintain continuous interlocking when installed.** Sheet piling including special fabricated sections shall be full-length sections of the dimensions shown. Sheet piling shall be provided with standard pulling holes.

2.2 APPURTENANT METAL MATERIALS

Metal plates, shapes, bolts, nuts, tie rod system, and other appurtenant fabrication and installation materials shall conform to manufacturer's standards and to the requirements specified in the respective sheet piling standards and in Section 05500 MISCELLANEOUS METALS.

2.3 TESTS, INSPECTIONS, AND VERIFICATIONS

Requirements for material tests, workmanship and other measures for quality assurance shall be as specified and in Section 05500 MISCELLANEOUS METAL.

2.3.1 Materials Tests

Materials tests shall conform to the following requirements. Sheet piling and appurtenant materials shall be tested and certified by the manufacturer to meet the specified chemical, mechanical and section property requirements prior to delivery to the site. Testing of sheet piling for mechanical properties shall be performed after the completion of all rolling and forming operations. Testing of sheet piling shall meet the requirements of ASTM A 6/A 6M.

2.3.2 Interlocked Joint Strength in Tension Test

The interlocked joint strength in tension test shall conform to the piling manufacturer's standard test, [illegible] testing at least two 3 inch long coupons taken randomly from different as-produced pilings of each heat and must be approved.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Pile Driving Equipment

Pile driving equipment shall conform to the following requirements.

3.1.1.1 Driving Hammers

Hammers shall be steam, air, or diesel drop, single-acting, double-acting, differential-acting, or vibratory type. The driving energy of the hammers shall be as recommended by the manufacturer for the piling weights and subsurface materials to be encountered.

3.1.2 Placing and Driving

3.1.2.1 Placing

Any excavation required within the area where sheet pilings are to be installed shall be completed prior to placing sheet pilings. Pilings shall be carefully located as shown. Pilings shall be placed plumb with out-of-plumbness not exceeding 1/8 inch per foot of length and true to line. Temporary wales, templates, or guide structures shall be provided to ensure that the pilings are placed and driven to the correct alignment. At least two templates shall be used in placing each piling and the maximum spacing of templates shall not exceed 20 feet. Pilings properly placed and driven shall be interlocked throughout their length with adjacent pilings to form a continuous diaphragm throughout the length or run of piling wall.

3.1.2.2 Driving

Prior to driving pilings in water a horizontal line shall be painted on both sides of each piling at a fixed distance from the bottom so that it shall be visible above the water line after installation. This line shall indicate the profile of the bottom elevation of installed pilings and potential problem areas can be identified by abrupt changes in its elevation. Pilings shall be driven with the proper size hammer and by approved methods so as not to subject the pilings to damage and to ensure proper interlocking throughout their lengths. Driving hammers shall be maintained in proper alignment during driving operations by use of leads or guides attached to the hammer. Caution shall be taken in the sustained use

of vibratory hammers when a hard driving condition is encountered to avoid interlock-melt or damages. The use of vibratory hammers should be discontinued and impact hammers employed when the penetration rate due to vibratory loading is one foot or less per minute. A protecting cap shall be employed in driving when using impact hammers to prevent damage to the tops of pilings. Pilings damaged during driving or driven out of interlock shall be removed and replaced at the Contractor's expense. Pilings shall be driven without the aid of a water jet unless otherwise authorized. Adequate precautions shall be taken to ensure that pilings are driven plumb. If at any time the forward or leading edge of the piling wall is found to be out-of-plumb in the plane of the wall the piling being driven shall be driven to the required depth and tapered pilings shall be provided and driven to interlock with the out-of-plumb leading edge or other approved corrective measures shall be taken to insure the plumbness of succeeding pilings. The maximum permissible taper for any tapered piling shall be 1/8 inch per foot of length. Pilings in each run or continuous length of piling wall shall be driven alternately in increments of depth to the required depth or elevation. No piling shall be driven to a lower elevation than those behind it in the same run except when the pilings behind it cannot be driven deeper. If the piling next to the one being driven tends to follow below final elevation it may be pinned to the next adjacent piling. If obstructions restrict driving a piling to the specified penetration the obstructions shall be removed or penetrated with a chisel beam. If the Contractor demonstrates that removal or penetration is impractical the Contractor shall make changes in the design alignment of the piling structure as directed to insure the adequacy and stability of the structure. Pilings shall be driven to depths shown and shall extend up to the elevation indicated for the top of pilings. A tolerance of 2 inches above the indicated top elevation will be permitted. Pilings shall not be driven within 100 feet of concrete less than 7 days old.

3.1.3 Cutting-Off and Splicing

Pilings driven to refusal or to the point where additional penetration cannot be attained and are extending above the required top elevation in excess of the specified tolerance shall be cut off to the required elevation. Pilings driven below the required top elevation and pilings damaged by driving and cut off to permit further driving shall be extended as required to reach the top elevation by splicing when directed at no additional cost to the Government. Pilings adjoining spliced pilings shall be full length unless otherwise approved. Ends of pilings to be spliced shall be squared before splicing to eliminate dips or camber. Pilings shall be spliced together with concentric alignment of the interlocks so that there are no discontinuities, dips or camber at the abutting interlocks. Spliced pilings shall be free sliding and able to obtain the maximum swing with contiguous pilings. The tops of pilings excessively battered during driving shall be trimmed when directed at no cost to the Government. Piling cut-offs shall become the property of the Contractor and shall be removed from the site. The Contractor shall cut holes in pilings for bolts, rods, drains or utilities as shown or as directed. All cutting shall be done in a neat and workmanlike manner. A straight edge shall be used in cuts made by burning to avoid abrupt nicks. Bolt holes in steel piling shall be drilled or may be burned and reamed by approved methods which will not damage the surrounding metal. Holes other than bolt holes shall be reasonably smooth and the proper size for rods and other items to be inserted.

3.1.4 Inspection of Driven Piling

The Contractor shall inspect the interlocked joints of driven pilings extending above ground. Pilings found to be out of interlock shall be removed and replaced at the Contractor's expense.

3.1.5 Pulling and Redriving

In the pulling and redriving of piles as directed, the Contractor shall pull selected pilings after driving to determine the condition of the underground portions of pilings. Any piling so pulled and found to be damaged to the extent that its usefulness in the structure is impaired shall be removed and replaced at the Contractor's expense. Pilings pulled and found to be in satisfactory condition shall be redriven when directed.

-- End of Section --

ASTM C 496	(1996) Splitting Tensile Strength of Cylindrical Concrete Specimens
ASTM C 595	(1997) Blended Hydraulic Cements
ASTM C 597	(1983; R 1991) Pulse Velocity Through Concrete
ASTM C 618	(1997) Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C 805	(1994) Rebound Number of Hardened Concrete
ASTM C 920	(1995) Elastomeric Joint Sealants
ASTM C 989	(1997) Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
ASTM C 1017	(1992) Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C 1064	(1986; R 1993) Temperature of Freshly Mixed Portland Cement Concrete
ASTM C 1077	(1997) Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
ASTM C 1107	(1997) Packaged, Dry, Hydraulic-Cement Grout (Nonshrink)
ASTM C 1157	(1994; Rev. A) Blended Hydraulic Cement
ASTM C 1202	**(DELETED)**
ASTM C 1218/C 1218M	(1997) Water-Soluble Chloride in Mortar and Concrete
ASTM C 1240	(1997) Silica Fume for Use in Hydraulic-Cement Concrete and Mortar
ASTM C 1260	(1994) Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM D 512	(1989; R 1994) Chloride Ion in Water
ASTM D 516	(1990; R 1995) Sulfate Ion in Water
ASTM D 1179	(1993) Fluoride Ion in Water
ASTM D 1190	(1996) Concrete Joint Sealer, Hot-Applied Elastic Type
ASTM D 1339	(1990) Sulfite in Water
ASTM D 1751	(1983; R 1991) Preformed Expansion Joint Filler for Concrete Paving and Structural

exposure (other than loading and wear in a passive environment) such as freezing and thawing, severe weathering, or deicing chemicals shall be air entrained and shall conform to the air limits specified in ACI 301.

e. Slump. The concrete mixture shall be proportioned to have, at the point of deposit, a maximum slump of 4 inches as determined by ASTM C 143. Where an ASTM C 494, Type F or G admixture is used, the slump after the addition of the admixture shall be no less than 6 inches nor greater than 8 inches. Slump tolerances shall comply with the requirements of ACI 117.

f. **(DELETED)**

2.1.3 Required Average Strength of Concrete

The minimum compressive strength (fcr) of the selected mixture shall equal or exceed the strength required under ACI 301 for laboratory mixture designs. The average compressive strength produced under field tests shall be the minimum compressive strength (fcr) required during construction.

2.1.4 Tremie Concrete Proportion

ACI 304R, Chapter 8. Concrete to be placed by the tremie process shall flow readily and yet be cohesive enough not to segregate. Cementitious materials shall be not less than 600 pounds per cubic yard of which pozzolan shall be 15 percent of the cementitious material weight to improve flow characteristics, maximum ratio of water to cement plus pozzolan of 0.45, a slump of 6 to 9 inches. Maximum aggregate shall be 3/4 inch; fine aggregate content of 45 to 55 percent by volume of total aggregate. Accomplish entrained air content of up to 5 percent using an air-entraining admixture. Water reducing or set retarding admixtures shall be used to reduce water content to provide a cohesive yet high slump concrete; cement content shall not be reduced. Maintain as high a slump as possible for as long as possible so blockage does not develop in the tremie and so concrete continues to flow freely after exiting the pipe.

2.2 MATERIALS

2.2.1 Cement

ASTM C 150, Type II and/or ASTM C 595, Type IP(MS) or IS(MS) and ASTM C 1157, Type MS blended cement except as modified herein. The tricalcium aluminate (C3A) content shall not be less than 4 percent to provide protection for the reinforcement and shall not be more than 8 percent to obtain concrete that is resistant to sulfate attack. Blended cements shall consist of a mixture of ASTM C 150 cement and one of the following materials: ASTM C 618 pozzolan or fly ash, or ASTM C 989 ground granulated blast-furnace slag. Use one manufacturer for each type of cement, ground slag, fly ash, and pozzolan.

2.2.1.1 Fly Ash and Pozzolan

ASTM C 618, Type N, F, or C; except that the maximum allowable loss on